What is claimed is:

1. A microscope for detecting luminescence generated from a specimen by irradiating and overlapping parts of a first light from a first light source for exciting a molecule from a ground-state to first electron exciting state to the specimen containing the molecule with three electronic states including at least a ground-state, a second light from a second light source for exciting the molecule from the first electron exciting state to the second electron exciting state with more higher energy level, by a beam-condensing optical system, comprising;

a first deflection means for deflecting the first light from the first light source two dimensionally,

a second deflection means for deflecting the second light from the second light source two dimensionally,

a combining means for synthesizing first light deflected by the first deflection means and second light deflected by the second deflection means on the same optical axis or on parallel optical axis to each other so as to progress the lights in the same direction, and

a third deflection means for deflecting the first light and the second light which are synthesized by the combining means simultaneously.

2. The microscope as claimed in claim 1, wherein the first deflection means includes at least two angle adjustment mirrors or prisms capable of adjusting deflection angle mutually independently.

3. The microscope as claimed in claim 1, wherein the second deflection means includes at least two angle adjustment mirrors or prisms capable of adjusting deflection angle mutually independently.

4. The microscope as claimed in claim 1, wherein the third deflection means includes at least two angle adjustment mirrors or prisms capable of adjusting deflection angle mutually independently.

5. The microscope as claimed in any one of claims 1, wherein a phase modulation element is provided in the optical path between the first light source and the first deflection means and/or in the optical path between the second light source and the second deflection means.

6. The microscope as claimed in any one of claims 1, wherein a first angle of divergence adjusting means for adjusting the angle of divergence of the

first light in the optical path between the first light source and the combining means, is provided.

7. The microscope as claimed in any one of claims 1, wherein a second angle of divergence adjusting means for adjusting the angle of divergence of the second light in the optical path between the second light source and the combining means, is provided.

8. The microscope as claimed in any one of claims 1, wherein a third angle of divergence adjusting means for adjusting the angle of divergence of the first light and the second light is provided in the optical paths of the first light and the second light synthesized by the combining means, simultaneously.

9. The microscope as claimed in claim 6, wherein the first angle of divergence adjusting means consists of an optical lens or a reflecting mirror.

10. The microscope as claimed in claim 7, wherein the second angle of divergence adjusting means consists of an optical lens or a reflecting mirror.

11. The microscope as claimed in claim 8, wherein the third angle of divergence adjusting means consists of an optical lens or a reflecting mirror.

12. The microscope as claimed in claim 6, wherein optical accuracy of the first angle of divergence adjusting means and the first deflection means is made below 1/10 wavelengths to wavelength of the first light.

13. The microscope as claimed in claim 7, wherein optical accuracy of the second angle of divergence adjusting means and the second deflection means is made below 1/10 wavelengths to wavelength of the second light.

14. The microscope as claimed in any one of claims 1, further comprising a beam diameter adjusting means for adjusting the beam diameter of the first light and/or the second light.

15. The microscope as claimed in any one of claims 1, further comprising the observation means for observing the beam-condensing state of the first light and the second light on the focal plane of the beam-condensing optical system.

16. An optical controlling method of microscope for detecting luminescence generated from a specimen by irradiating and overlapping parts of a first light from a first light source for exciting a molecule from a ground-state to first electron exciting state to the specimen containing the molecule with three electronic states including at least a ground-state, a second light from a second

light source for exciting the molecule from the first electron exciting state to the second electron exciting state with more higher energy level, by a beam-condensing optical system, comprising;

a first deflection means for deflecting the first light from the first light source two dimensionally,

a second deflection means for deflecting the second light from the second light source two dimensionally,

a combining means for synthesizing first light deflected by the first deflection means and second light deflected by the second deflection means on the same optical axis or on parallel optical axis to each other so as to progress the lights in the same direction, and

a third deflection means for deflecting the first light and the second light which are synthesized by the combining means simultaneously,

an observation means for observing the beam-condensing state of the first light and the second light on the focal plane of the beam-condensing optical system, characterized by comprising

a step of adjusting the optical axis of the first light and the optical axis of the second light independently by the first deflection means and the second deflection means, while observing the focal plane with the observation means by locating the reflection member on the focal plane of the beam-condensing optical system, and

a step of performing the positioning of the first light and the second light on the focal plane, by adjusting the optical axis of the first light and the optical axis of the second light by the third deflection means simultaneously.

17. An optical controlling method for microscope as claimed in claim 16, wherein a slide glass is used as a reflection member.